NRL BAA Announcement
 # 73-09-01

OCEAN DYNAMICS AND PREDICTION OCEANOGRAPHY

The Oceanography Division (Code 7300) of the Naval Research Laboratory (NRL) is interested in proposals of basic and applied research in its mission areas of ocean dynamics and prediction, and of ocean feature and process analysis using remote and in situ data. Ocean dynamics and prediction includes basic and applied research in computer modeling of ocean hydro/thermodynamics (i.e., ocean circulation and density structure), modeling of ice dynamics, coupled ocean/acoustic, ocean/atmosphere, ocean/sediment, and ocean/biological model development, computational numerical techniques, visualization of ocean features and dynamical processes, data assimilation and the analysis of satellite oceanographic data as related to the development of modeling and data assimilation capabilities. Deep ocean basins, marginal and semi-enclosed seas, coastal regions harbors and rivers are of interest. Expanded ocean physics included in such systems and areas for future research and development include ocean tide and wave and surf modeling as well as upper ocean processes. Research in computational techniques includes the study of efficient solutions to partial differential equations arising in oceanography with a special focus on efficient utilization of massive parallel processing technology. Ocean feature and process analysis includes development of sensor systems that acquire the in-situ spatial and temporal properties of oceanographic environmental parameters including wave height, wave direction, currents, temperature, salinity, wind speed, and wind direction. Innovative ideas, trawl resistant designs, real-time data access, and covert operations are of high interest. Development of algorithms and techniques for processing remotely sensed ocean data, with special application to determining ocean features and properties from multispectral, hyperspectral, and optical data is of high interest. Application of ocean data and analysis to systems performance models for emerging and operational Navy sensors and systems is also of interest. The ocean nowcast/forecast and simulation systems have broad and direct application to issues related to Naval operations (ASW, Search & Rescue, Amphibious landing, Mine and Special Warfare, Mission Planning, etc.). These systems also are directly applicable to the simulation and design of global, regional and coastal observing systems.

Address White Papers (WP) to Code 7300, or e-mail, telephone (228) 688-4704. Allow one month before requesting confirmation of receipt of WP, if confirmation is desired. Substantive contact should not take place prior to evaluation of a WP by NRL. If necessary, NRL will initiate substantive contact.